

# **LOUISIANA DEPARTMENT OF WILDLIFE & FISHERIES**



**OFFICE OF FISHERIES  
INLAND FISHERIES SECTION**

**PART VI –C (ARCHIVES)**

**WATERBODY MANAGEMENT PLAN SERIES**

**JOHN K. KELLY  
GRAND BAYOU RESERVOIR**

**AQUATIC VEGETATION TYPE MAPS  
AND NARRATIVES**

## **TYPEMAPS**

### **GRAND BAYOU**

1998

Melvin Bagwell

At the time of the assessment, Grand Bayou Reservoir was at pool stage. The water color was clear and no turbidity.

The aquatic plants surveyed were filamentous algae and *Utricularia gibba*. There were no floating or emersed plants noted at this time.

The distribution of aquatic plants was very light and isolated to the shallow water in the upper end.

### **Grand Bayou Reservoir**

1999

Melvin Bagwell

At the time of the assessment, Grand Bayou Reservoir was at pool stage. The water color was clear.

The submersed aquatic plants noted were coontail (*Ceratophyllum demersum*), *Char* sp., pondweed (*Potamogeton* spp.), and hydrilla (*Hydrilla verticillata*). The infestations of submersed plants were light and isolated to the upper end. One infestation of hydrilla was noted in a cove to the left of the public landing.

The emersed plants noted were primrose (*Ludwigia* sp.) and smartweed (*Polygonum* sp.). All infestations of emersed plants were light and marginal.

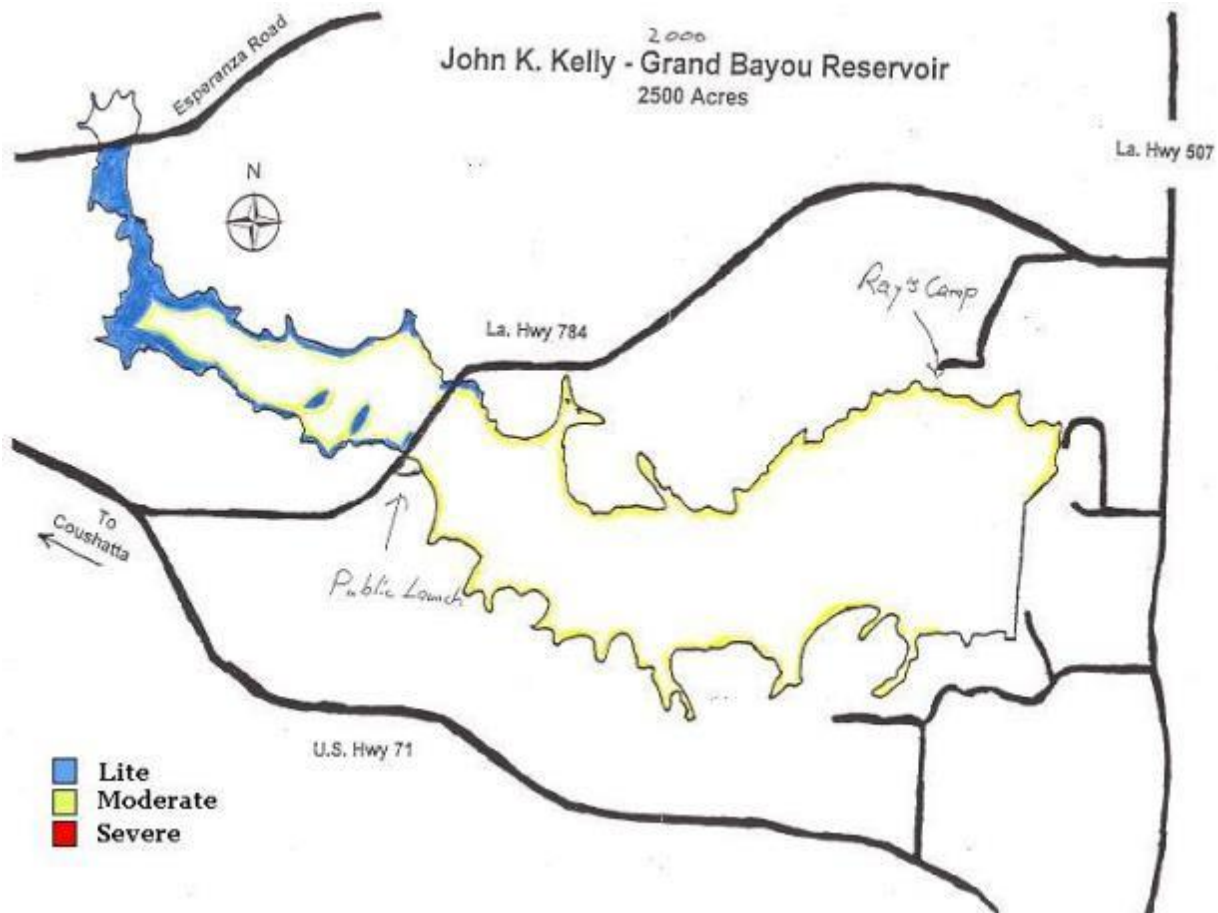
John K. Kelly Reservoir  
August 2000  
Melvin Bagwell

At the time of the assessment John K. Kelly Reservoir was at pool stage. The water color was stained in the upper end of the lake and almost clear in the lower end or dam area.

The submersed plants noted were hydrilla, *Ceratophyllum*, *Potamogeton*, southern naiad, *Chara* and filamentous algae.

The emersed plants noted were white water lily, smartweed, and water primrose.

The estimated percentage coverage of infestation was 5 percent.



# JOHN KELLY RESERVOIR (GRAND BAYOU LAKE)

JULY 2001

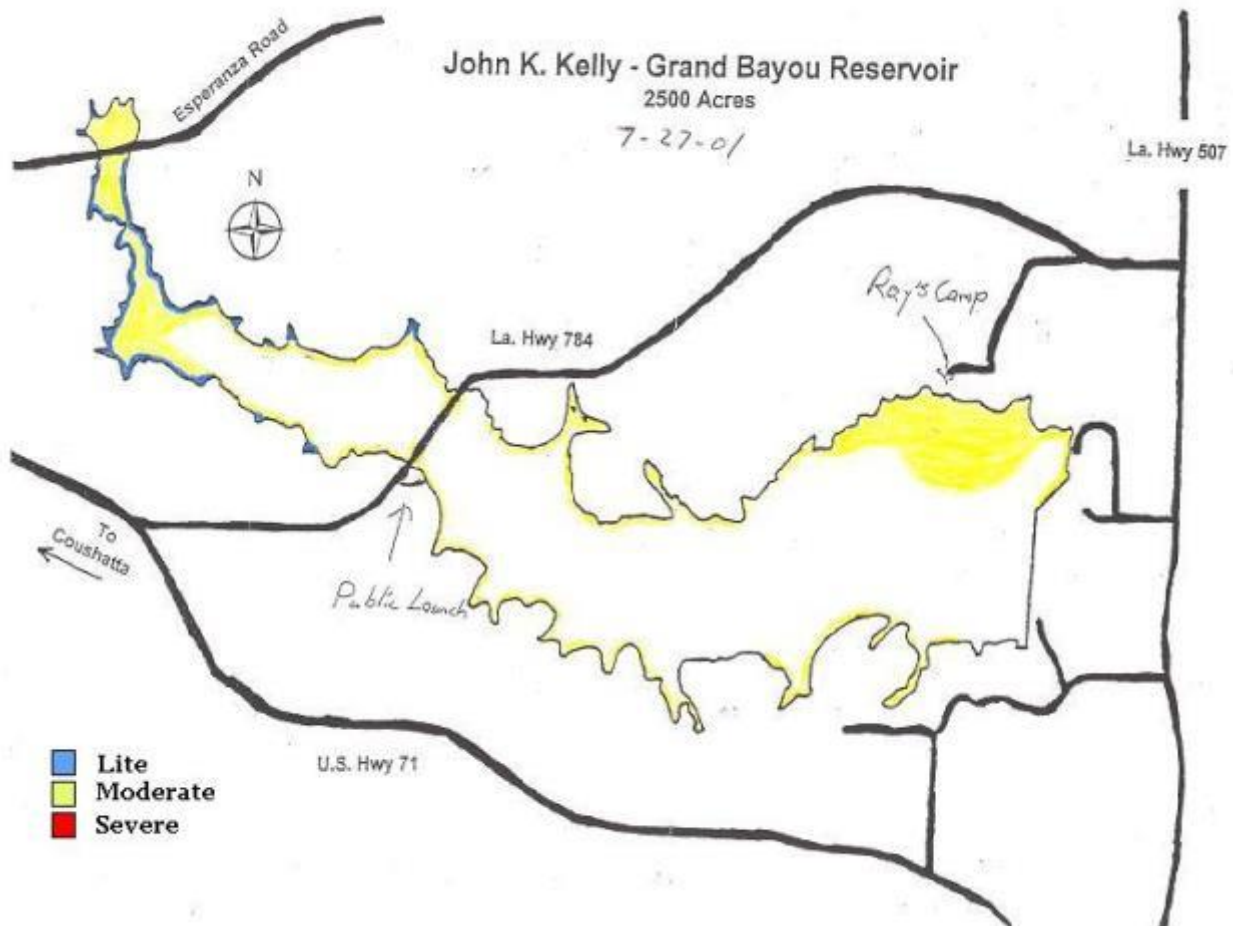
Melvin Bagwell

John Kelly Reservoir was surveyed for the presence of aquatic vegetation on July 27, 2001. At the time of the survey the lake was at pool stage. The water color was slightly turbid.

The submersed plants noted were: hydrilla (*Hydrilla verticillata*), Chara, coontail (*Ceratophyllum demersum*), filamentous algae, southern naiad (*Najas guadalupensis*), and Eleocharis.

The emersed plants noted were: water hyacinth (*Eichhornia crassipes*), smartweed (*Polygonum sp.*), spike rush, water primrose (*Ludwigia sp.*), and bulrush.

The estimate percent coverage of submersed plants was 15%.



## **Grand Bayou Reservoir Vegetation Type Map September 2005**

The vegetation type mapping survey was conducted by Louisiana Department of Wildlife and Fisheries employees on September 15<sup>th</sup> and 20<sup>th</sup>, 2005. Jeff Sibley, Biologist Supervisor District 1, assisted by Todd Bridges identified the major aquatic plant species present in the lake and assessed the extent of coverage around the lake. At the time of the survey, the lake was 1 foot below pool and the water was clear.

### **Species Present**

The plant community on Grand Bayou is made up of the following species: water hyacinth (*Eichhornia crassipes*), fanwort (*Cabomba caroliniana*), coontail (*Ceratophyllum demersum*), hydrilla (*Hydrilla verticillata*), primrose (*Ludwigia spp.*), water shield (*Brasenia schreberi*), Illinois pondweed (*Potamogeton illinoensis*), and Chara grass (*Chara spp.*).

### **Severity**

Aquatic vegetation covers 15-20% of the lake. The water is clear due to the vegetation and relatively infertile sandy soil. The hydrilla may be locking up nutrients making them unavailable for plankton growth.

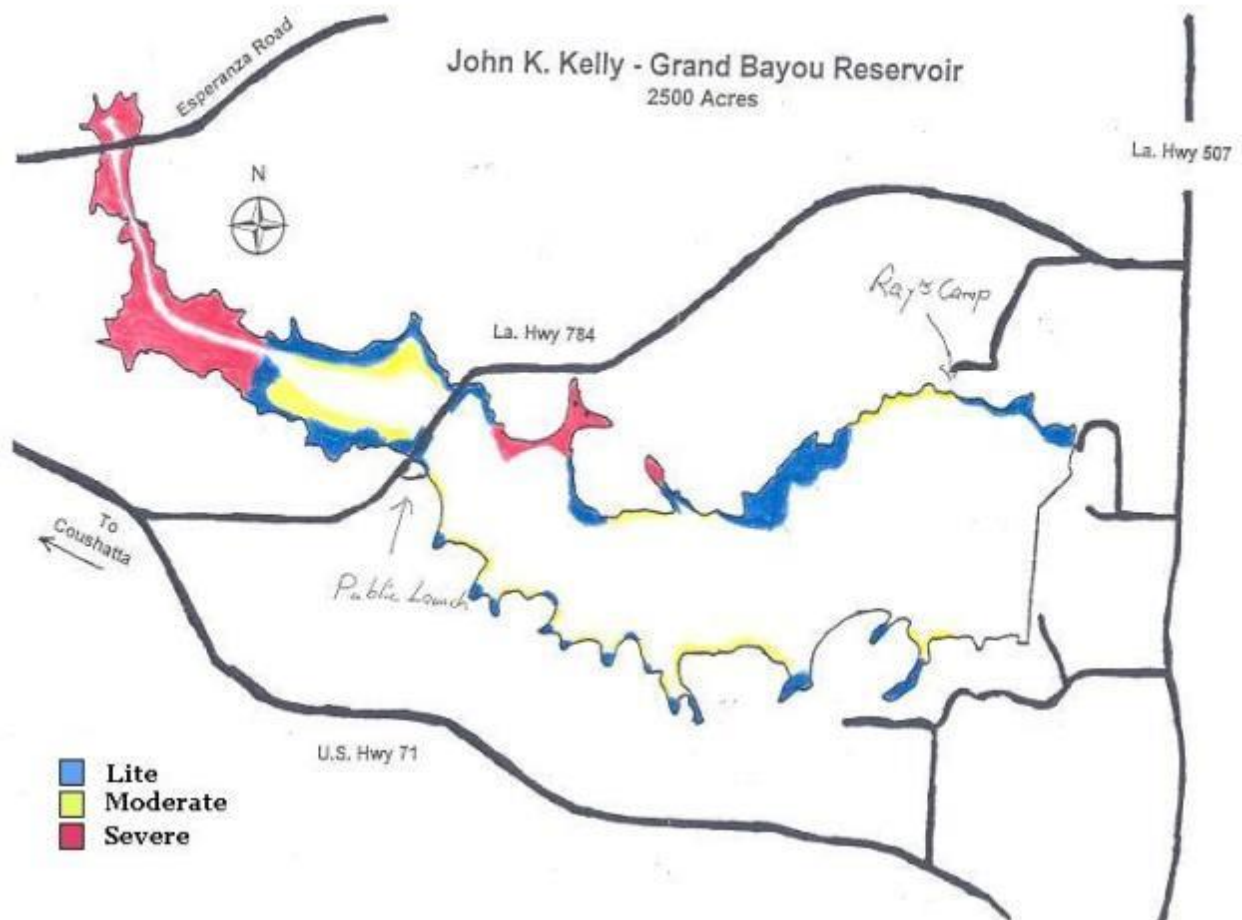
The upper portion of the lake, above the Hwy 784 bridge (see attached map), is the most severe. Access can be limited to the creek channel as one continues up the lake. Water hyacinths first appeared in this portion of the lake, but have been contained through herbicide efforts. There are still isolated patches of hyacinths, mainly in the extreme shallow areas in the back of pockets. Approximately 65-75% of the aquatic vegetation in the lake is located above the bridge.

Submerged vegetation is most prevalent on Grand Bayou. A fringe of a fanwort and hydrilla mixture is present along most of the shoreline. Hydrilla will usually be found closer to the shore with fanwort out slightly deeper, but the distribution of the two often changes. Submerged vegetation was found out to a 4.5-5' contour line. The lake was approximately 1' below pool at the time of the survey; therefore, vegetation could be found in 6' of water under normal conditions. Coontail was identified in a few areas, but at relatively low densities.

Emergent vegetation consists primarily of watershield and Illinois pondweed. A 5-10' fringe is present around much of the lake. Primrose species were identified in many areas, but at relatively low densities.

Grand Bayou has a general pattern of macrophytes that is consistent around the reservoir. The lake has a clean bottom because much of the lake bed was cleared during construction, however many areas were left shallow with very gentle slopes. The points in the lake often extend far out into the lake at depths of less than 3', especially on the northern shore. Vegetation will become dense and expansive upon these points. Traveling away from the points and into the pockets, vegetation densities drop and extend only short distances from the bank. Some areas will have almost a clean shoreline. The fanwort/hydrilla mixture becomes more prevalent as one travels to the back of the coves. These plant beds will stretch across the entire cove, but are not matted

across the surface. Boating access becomes difficult due to the vegetation and shallow water in the back ends of the coves.



## **Grand Bayou Reservoir Vegetation Type Map July 2006**

The vegetation type mapping survey was conducted by Louisiana Department of Wildlife and Fisheries employees on July 11<sup>th</sup> and July 14<sup>th</sup> 2006. An aerial survey was performed on the 11<sup>th</sup> by biologists James Seales and Jeff Sibley. A boat survey was performed on the 14<sup>th</sup>. Jeff Sibley, Todd Bridges, and Ronnie Christ identified the major aquatic plant species present in the lake and assessed the extent of coverage around the lake. At the time of the survey, the lake was 0.5 foot below pool and the water was clear.

### **Species Present**

The plant community on Grand Bayou is made up of the following species: water hyacinths(*Eichhornia crassipes*), fanwort (*Cabomba caroliniana*), coontail (*Ceratophyllum demersum*), hydrilla (*Hydrilla verticillata*), primrose(*Ludwigia spp.*), water shield (*Brasenia schreberi*), Illinois pondweed (*Potamogeton illinoensis*), giant salvinia (*Salvinia molesta*), duckweed (*Lemna minor*), alligatorweed (*Alternanthera philoxeroides*), lizard's tail(*Saururus cernuus*), southern watergrass (*Hydrochloa caroliniensis*), primrose(*Ludwigia uruguayensis*), roadgrass (*Eleocharis baldwinii*), pennywort(*Hydrocotyle umbellata*), fragrant water lily(*Nymphaea odorata*), American Lotus(*Nelumbo lutea*), frog's-bit (*Limnobium spongia*), *Sagittaria spp.*, filamentous algae, variable-leaf milfoil ( *Myriophyllum heterophyllum*) and chara grass (*Chara spp.*).

### **Severity**

Aquatic vegetation covers approximately 30 % of the lake. The water is clear due to the vegetation and relatively infertile sandy soil. The hydrilla may be locking up nutrients making them unavailable for plankton growth.

The upper portion of the lake, above the Hwy 784 bridge (see attached map), is the most severe. Hydrilla is the dominant species and access becomes limited to the creek channel as one continues up the lake. This area of the lake contains almost all the above listed species to some extent.

Submerged vegetation is most prevalent on Grand Bayou, with hydrilla being the dominant species in the plant community. A fringe of a fanwort and hydrilla is present along most of the shoreline. Hydrilla will usually be found closer to the shore with fanwort out slightly deeper, but the distribution of the two often changes. Submerged vegetation was found most commonly out to a 6-7' contour line, but hydrilla was found in as deep as 10' contour line in one area. Grand Bayou has many submerged humps that were created during construction of the lake. Many of these humps have hydrilla present. Hydrilla was found growing in 8-9' off the edges of some humps in the main lake area. Coontail was identified in a few areas, but at relatively low densities.

Emergent vegetation consists primarily of watershield and Illinois pondweed. A 5-10' fringe is present around much of the lake. Primrose species were identified in many areas, but at relatively low densities. Watershield is severe in the back end of several pockets limiting access.

Grand Bayou has a general pattern of macrophytes that is consistent around the reservoir. The lake has a clean bottom because much of the lake bed was cleared during construction, however many areas were left shallow with very gentle slopes. The points in the lake often extend far out into the lake at depths of less than 3', especially on the northern shore. Vegetation will become dense and expansive upon these points. Traveling away from the points and into the pockets, vegetation densities drop and extend only short distances from the bank. Some areas will have almost a clean shoreline. The fanwort/hydrilla mixture becomes more prevalent as one travels to the back of the coves. These plant beds will stretch across the entire cove making boating access difficult due to the vegetation and shallow water in the back ends of the coves.

Giant salvinia was found adjacent to the boat launch at the park during the survey. All visible giant salvinia plants were physically removed from the lake and the area treated with herbicides to attempt to kill any remaining plants.

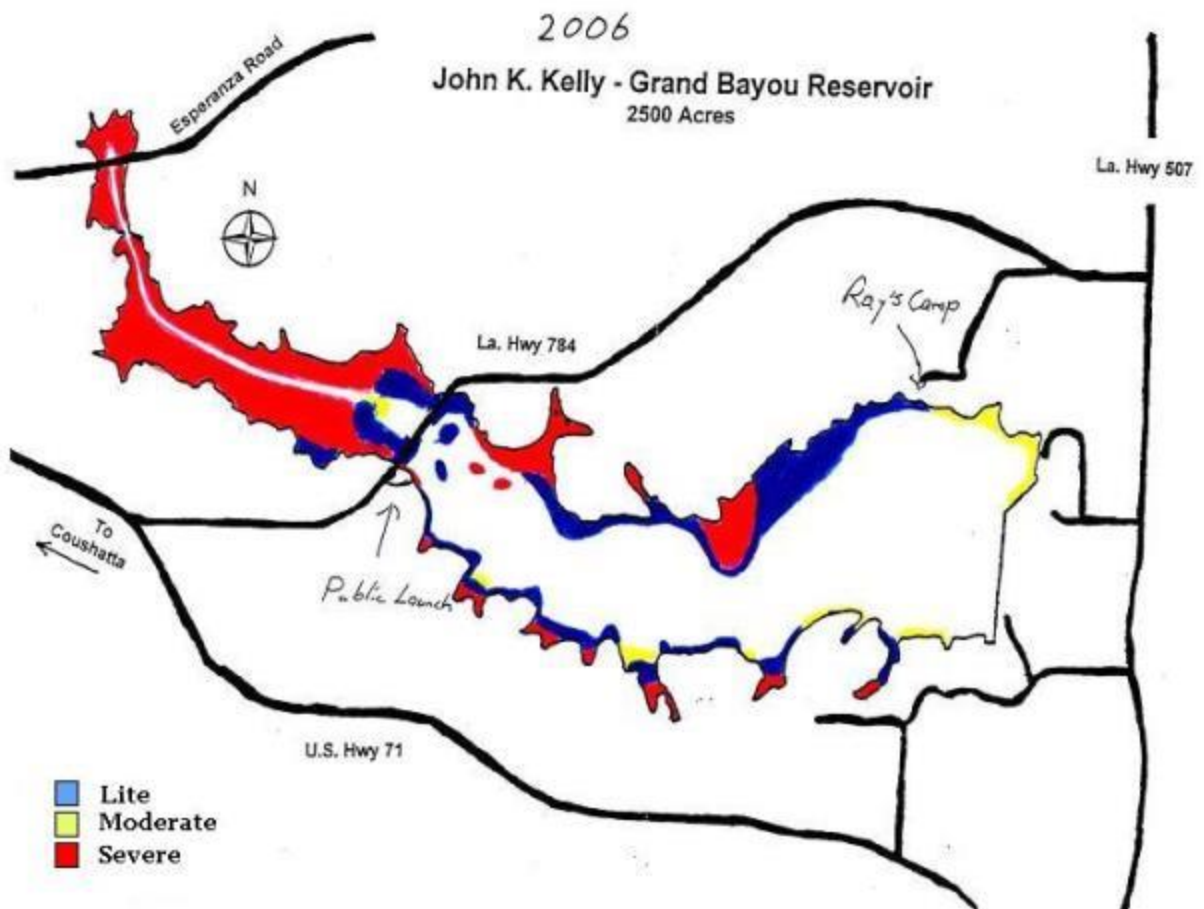
### **Vegetation Management**

With the presence of three exotic, invasive species (water hyacinths, hydrilla and giant salvinia), Grand Bayou is a lake that will be necessary to closely monitor and likely take control actions in the near future. Water hyacinths have been controlled through spray efforts in the past, and are at relatively low densities in the lake. The hyacinths are generally stranded in the back of coves near the shore and are trapped on the other vegetation.

The presence of giant salvinia is a major concern. The plant was only located near the boat launch and was likely brought in on a boat trailer. In the spring of 2006, this plant has been identified in three other lakes in district 1 for the first time. This plant may be introduced at any time from another similar incident from boats to Grand Bayou. The plant may have been eradicated from the lake through the efforts during this survey, but it will be necessary to be watchful for this plant and treat any new areas that are found as soon as possible.

Hydrilla currently poses the largest threat to the lake. It was first found in the lake in 1999 and has shown a steady growth rate to its current density. The change in coverage from 2005 to 2006 is noteworthy. The plant is growing in deeper water and has significantly increased coverage. The current hydrilla density falls within the range that is optimal for fish production, and fisheries samples have not reflected any adverse effects on the population. However, drawdowns will likely be needed in the near future to control the hydrilla from reaching undesirable levels.





**Grand Bayou Reservoir  
Vegetation Type Map  
August 2007**

The vegetation type mapping survey was conducted by Louisiana Department of Wildlife and Fisheries employees on August 14<sup>th</sup>, 2007. Jeff Sibley and Ronnie Christ identified the major aquatic plant species present in the lake and assessed the extent of coverage around the lake. At the time of the survey, the lake was 0.5 feet below pool and the water was clear.

**Species Present**

The plant community on Grand Bayou is made up of the following species: water hyacinths(*Eichhornia crassipes*), fanwort (*Cabomba caroliniana*), coontail (*Ceratophyllum demersum*), hydrilla (*Hydrilla verticillata*), primrose(*Ludwigia spp.*), water shield (*Brasenia schreberi*), Illinois pondweed (*Potamogeton illinoensis*), giant salvinia (*Salvinia molesta*), duckweed (*Lemna minor*), alligator weed (*Alternanthera philoxeroides*), lizard's tail(*Saururus cernuus*), southern watergrass (*Hydrochloa caroliniensis*), primrose(*Ludwigia uruguayensis*), roadgrass (*Eleocharis baldwinii*), pennywort(*Hydrocotyle umbellata*), fragrant water lily(*Nymphaea odorata*), American Lotus(*Nelumbo lutea*), frog's-bit (*Limnobium spongia*), *Sagittaria spp.*, *Najas spp.*( including slender naiad and southern naiad plus others), *Potamogeton spp.*, Smartweed (*Polygonum hydropiperoides*), bladderwort ( *Utricularia spp.*), cutgrass (*Leersia hexandra*) filamentous algae, variable-leaf milfoil ( *Myriophyllum heterophyllum*) and chara grass (*Chara spp.*).

**Severity**

Aquatic vegetation covers approximately 25% of the lake. The water is clear due to the vegetation and relatively infertile sandy soil.

The upper portion of the lake, above the Hwy 784 bridge (see attached map), is the most severe. Submerged vegetation is most prevalent on Grand Bayou. Species composition of submergents has changed dramatically following the 06-07 drawdown. Total coverage of aquatic vegetation on the reservoir has not decreased much, however much of the hydrilla that was found in 2006 has been replaced with native macrophytes. Hydrilla can still be found above the Hwy 784 bridge in a monoculture as well as mixed in with other vegetation on the lower end of the lake. Submerged vegetation could be found at depths of 6' below pool.

Emergent vegetation consists primarily of southern watergrass and Illinois pondweed. A 5-10' fringe is present around much of the lake. Primrose species were identified in many areas, but at relatively low densities.

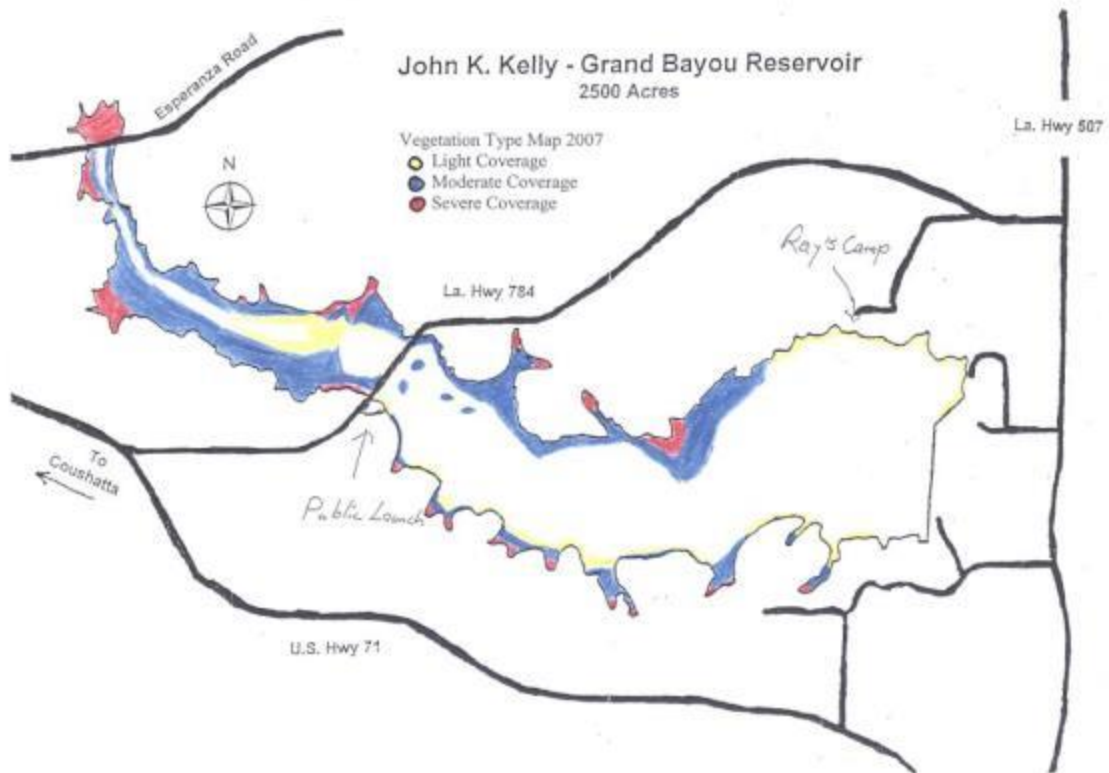
Giant salvinia was found adjacent to the boat launch at the park during the survey and just above the bridge on the southern shoreline. Another infestation was found in a small cove near the dam. Giant salvinia was first found in this cove in winter of 2006 while Grand Bayou was undergoing the drawdown. This cove has a small boat ramp located within. Plants were treated with herbicide at that time using backpack equipment and some physical removal. Christ and Sibley returned on 8/15/07 and applied foliar herbicides in all identified areas of giant salvinia.

### **Vegetation Management**

With the presence of three exotic, invasive species (water hyacinths, hydrilla and giant salvinia), Grand Bayou is a lake that will be necessary to closely monitor and likely take control actions in the near future. Water hyacinths have been controlled through spray efforts in the past, and are at relatively low densities in the lake. The hyacinths are generally stranded in the back of coves near the shore and are trapped on the other vegetation.

The presence of giant salvinia is a major concern. This plant will need close monitoring and herbicide treatments will be necessary. Much of the salvinia found during the survey should be stranded and exposed to drying conditions during a drawdown. However, it will be important to monitor for salvinia once the lake returns to pool as this plant may be introduced at any time from boats entering Grand Bayou.

Hydrilla currently poses the largest threat to the lake. It was first found in the lake in 1999 and has shown a steady growth rate to its 2006 density. Overall densities of hydrilla were greatly reduced from the 2006 drawdown, but the return of hydrilla in many areas indicates the survival of viable tubers that will continue to produce more hydrilla if further action is not taken. The lake should be lowered again in 2007 as part of the current management plan in place for hydrilla. The lake should be lowered to a level of at least 7' below pool starting post-Labor Day and the gates remain open until late January 2008. Hydrilla densities will be monitored in 2008 and results of this second drawdown will be documented.



## **Grand Bayou Reservoir Vegetation Type Map August 2008**

The vegetation type mapping survey was conducted by Louisiana Department of Wildlife and Fisheries employees on August 5th 2008. Jeff Sibley and Kevin Houston identified the major aquatic plant species present in the lake and assessed the extent of coverage around the lake. At the time of the survey, the lake was approximately 1 foot below pool and the water was clear. Conditions were windy the day of the survey making some observations of submerged vegetation more difficult.

### **Species Present**

The plant community on Grand Bayou is made up of the following species: water hyacinths(*Eichhornia crassipes*), hydrilla (*Hydrilla verticillata*), primrose(*Ludwigia spp.*), Illinois pondweed (*Potamogeton illinoensis*), giant salvinia (*Salvinia molesta*), duckweed (*Lemna minor*), alligator weed (*Alternanthera philoxeroides*), lizard's tail(*Saururus cernuus*), southern watergrass (*Hydrochloa caroliniensis*), roadgrass (*Eleocharis baldwinii*), pennywort(*Hydrocotyle umbellata*), fragrant water lily(*Nymphaea odorata*), frog's-bit (*Limnobia spongia*), *Sagittaria spp.*, filamentous algae, variable-leaf milfoil ( *Myriophyllum heterophyllum*), *Bacopa spp.*, *Najas spp.*( including slender naiad and southern naiad plus others), *Potamogeton spp.*, Smartweed (*Polygonum hydropiperoides*), bladderwort ( *Utricularia spp.*), cutgrass (*Leersia hexandra*) and chara grass (*Chara spp.*).

### **Severity**

Aquatic vegetation covers approximately 5 % of the lake. Submerged vegetation was found out to the 4' contour line, but is mainly located near shore and in the shallow reaches of coves. Much of the shoreline of the lake contains the emergent species listed above in a narrow fringe of 2-5' in width. Most submerged vegetation is made up of a combination of native species, primarily the *Potamogeton spp.* and *Najas spp.*

Water hyacinth could be found in very low densities, but scattered around the lake. Giant salvinia was first found on the lake in 2006 and has remained at low densities due to herbicide efforts combined with the two previous drawdowns. New introductions of the plant have been made in 2008, likely from boat trailers at the park launch as this appears to be the "center" of the infestation. Salvinia was found along the southern shore of the lake in the first cove just above the bridge and around the boat ramp area. Salvinia plants were identified in the still areas of the lake along the southern shore in the next several coves, but densities were light and decreased as one traveled away from the boat launch. Few tertiary salvinia plants were found. A small amount of giant salvinia was identified on the Northern shore of the lake across from the boat launch in the "pocket" behind the large island. Salvinia plants for the most part had been treated with herbicide and were limited to the extreme shallows or upper reaches of coves where waters were still and quiet.

Hydrilla was found on Grand Bayou during the survey, but at low densities. Hydrilla was found using a drag to collect vegetation in a few areas of the lake. Hydrilla plants found were new growth that were 4-6" in length and would indicate that remaining tubers are still active and have

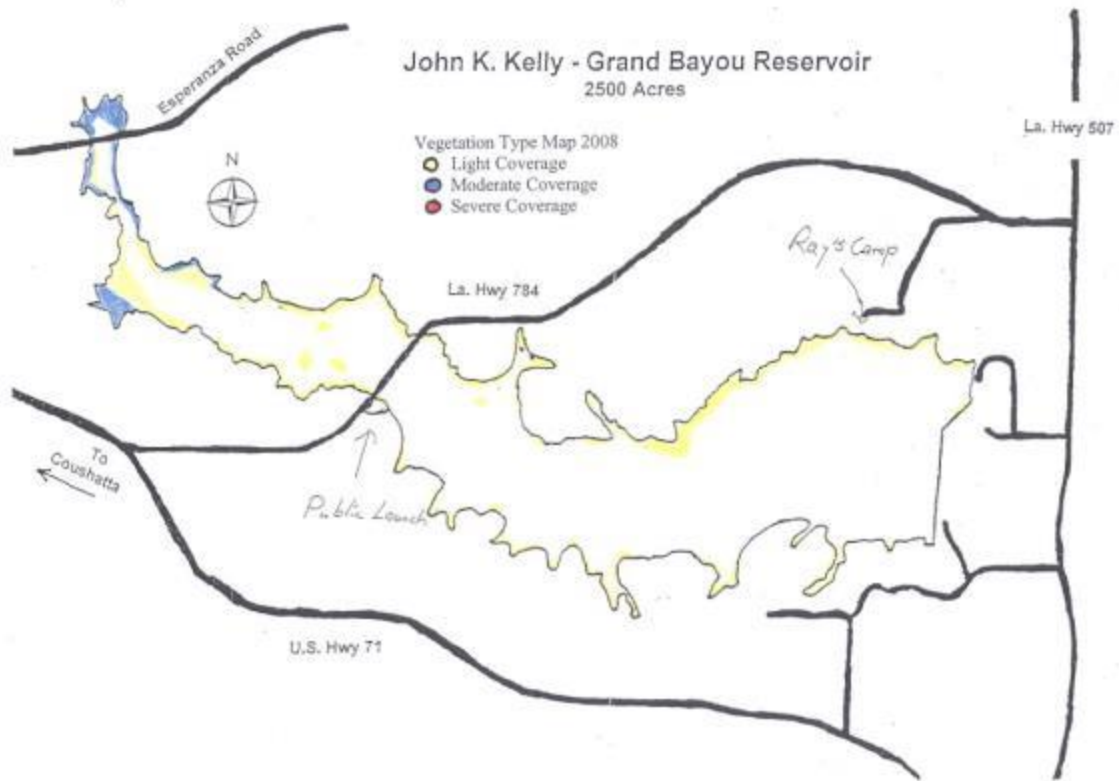
sprouted. Hydrilla was identified above the bridge, in the “pocket” behind the large island, and off the long shallow point west of “Ray’s camp.”

### **Vegetation Management**

With the presence of three exotic, invasive species (water hyacinths, hydrilla and giant salvinia), Grand Bayou is a lake that will be necessary to closely monitor and likely take control actions in the near future. Water hyacinths have been controlled through spray efforts in the past, and are at relatively low densities in the lake. The hyacinths are generally stranded in the back of coves near the shore and are trapped on the other vegetation.

Giant salvinia poses a large threat to any waterbody it is found in. Salvinia was first found in Grand Bayou in 2006 and has remained at low densities through herbicide efforts and the two previous drawdowns have likely stranded other salvinia plants allowing them to desiccate. It would be likely that with a 2008/09 drawdown, much of the salvinia present will be stranded on dry ground and die. If salvinia could be eradicated from the lake with the current light infestation that is present, the threat of a reintroduction is always present. A new introduction can quickly become a large problem given the growth potential of the plant. Things to consider and act upon in the future include, but not limited to a close monitoring system of the boat launch area for new infestations, a physical removal program for such small introductions, and perhaps a barrier put in place around the boat ramp to catch new plants as they float off of trailers, thus preventing the salvinia from floating into new areas of the lake.

Hydrilla densities have been greatly reduced from the two previous drawdowns. In 2006, hydrilla covered approximately 30% of the reservoir and has now been reduced to the point where no hydrilla was observed visually during the survey. Hydrilla plants were found using a drag in several areas of the lake that originally had severe infestations of the plant. Hydrilla shoots found were 4-6” in length and indicated new growth occurring from the tubers in the soil. The original management plan for hydrilla on John K. Kelly reservoir called for a series of 3-5 drawdowns and it is evident that the first two drawdowns have shown positive results with lowered the densities of hydrilla. At this time the lake should be dewatered for the third year of the plan, as the new hydrilla growth found indicates that active tubers are still present in the lake. The lake can be dewatered to a depth of 7’ below pool stage starting post-Labor Day and the gates remain open until the end of January. The lake should be re-evaluated in 2009 and a decision made at that time about additional drawdowns.



## **Grand Bayou Reservoir Vegetation Type Map September 2009**

The vegetation type mapping survey was conducted by Louisiana Department of Wildlife and Fisheries employees during September 2009. Jeff Sibley and Kevin Houston identified the major aquatic plant species present in the lake and assessed the extent of coverage around the lake. At the time of the survey, the lake was at pool stage and the water was clear. Conditions were windy during the survey making some observations of submerged vegetation more difficult.

### **Species Present**

The plant community on Grand Bayou is made up of the following species: water hyacinths(*Eichhornia crassipes*), hydrilla (*Hydrilla verticillata*), primrose(*Ludwigia spp.*), Illinois pondweed (*Potamogeton illinoensis*), giant salvinia (*Salvinia molesta*), duckweed (*Lemna minor*), alligator weed (*Alternanthera philoxeroides*), lizard's tail(*Saururus cernuus*), southern watergrass (*Hydrochloa carolinensis*), roadgrass (*Eleocharis baldwinii*), pennywort(*Hydrocotyle umbellata*), fragrant water lily(*Nymphaea odorata*), frog's-bit (*Limnobia spongia*), *Sagittaria spp.*, filamentous algae, variable-leaf milfoil ( *Myriophyllum heterophyllum*), *Bacopa spp.*, *Najas spp.*( including slender naiad and southern naiad plus others), *Potamogeton spp.*, Smartweed (*Polygonum hydropiperoides*), bladderwort ( *Utricularia spp.*), cutgrass (*Leersia hexandra*) and chara grass (*Chara spp.*).

### **Severity**

Aquatic vegetation covers approximately 5-8 % of the lake. Submerged vegetation was found out to the 4.5' contour line, but is mainly located near shore and in the shallow reaches of coves. Much of the shoreline of the lake contains the emergent species listed above in a narrow fringe of 2-5' in width. Most submerged vegetation is made up of a combination of native species, primarily the *Potamogeton spp.* and *Najas spp.*

Water hyacinth could be found in very low densities, but scattered around the lake. Giant salvinia was first found on the lake in 2006 and has remained at low densities due to herbicide efforts combined with three previous drawdowns (2006-2008). Salvinia was found in relatively low concentrations throughout the lake. All three stages of the plant were present with primary and secondary plants scattered and drifting with wind currents. Tertiary salvinia plants could be found in small mats in protected, calm waters of most coves on the lake. Salvinia had expanded coverage during the 2009 growing season and densities were increasing on the lake. Giant salvinia was estimated to cover approximately 20 acres combined on the lake with many of the plants found near the margins of the lake where it was combined with cutgrass and other shoreline, marginal plants.

Hydrilla was found on Grand Bayou during the survey, but at low densities. Hydrilla was found using a drag to collect vegetation in a few areas of the lake. Hydrilla plants found were new growth that were 4-6" in length and would indicate that remaining tubers are still active and have sprouted. Hydrilla was identified above the bridge, in the "pocket" behind the large island, and off the long shallow point west of "Ray's camp." These are the same locations where hydrilla was found in 2008 and densities of hydrilla in the area remained similar to the previous year.



## **Vegetation Management**

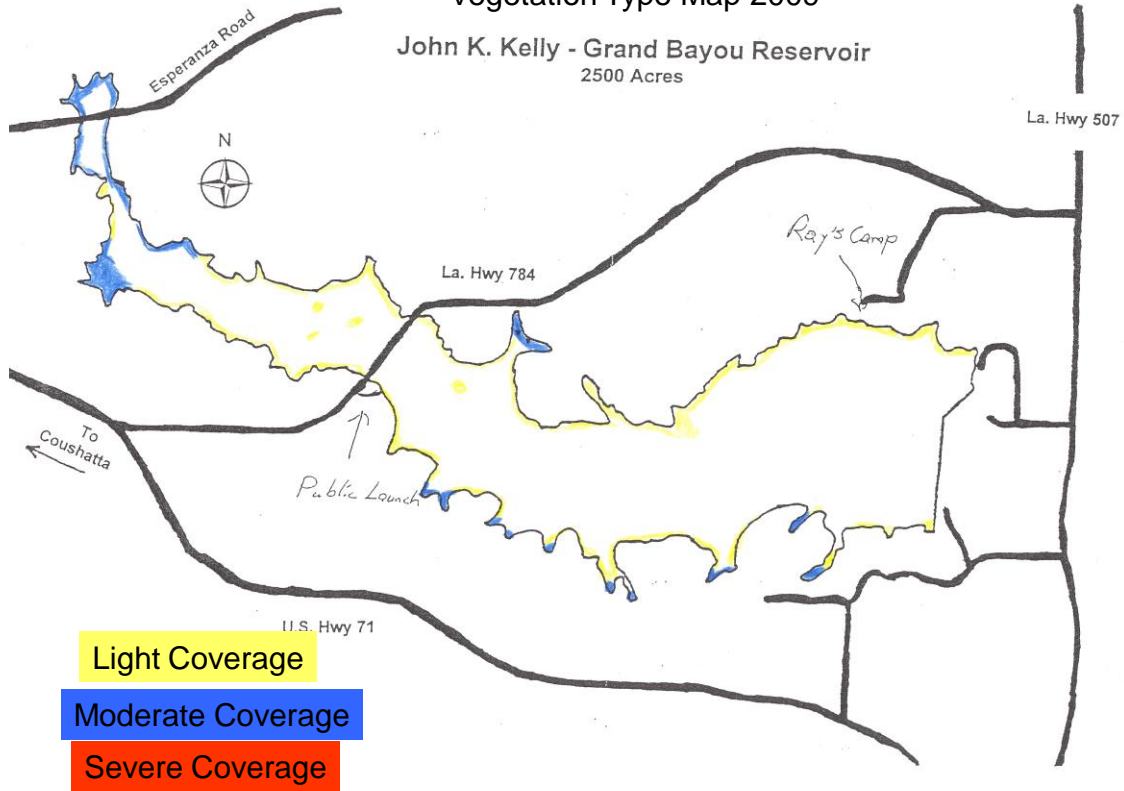
With the presence of three exotic, invasive species (water hyacinths, hydrilla and giant salvinia), Grand Bayou is a lake that will be necessary to closely monitor and likely take control actions in the near future. Water hyacinths have been controlled through spray efforts in the past, and are at relatively low densities in the lake. The hyacinths are generally stranded in the back of coves near the shore and are trapped on the other vegetation.

Giant salvinia poses a large threat to any waterbody it is found in. Salvinia was first found in Grand Bayou in 2006 and has remained at low densities through herbicide efforts and the three previous drawdowns have likely stranded other salvinia plants allowing them to desiccate. However, during the 2009 growing season giant salvinia plants were expanding both coverage and density on the lake and posing a more ominous threat. The 2009-2010 winter was quite severe. Extreme cold causing ice formation on area lakes in January 2010 combined with several flood events starting in October 2009, have contributed to reduced levels of salvinia coverage's on Northwest Louisiana water bodies. Coming out of the winter, giant salvinia coverage's on Grand Bayou are extremely reduced. Of course with the plants growth potential, any plants remaining viable plants in the lake could rapidly expand and multiply in the 2010 growing season. Additionally the threat of introductions from other waterbodies is always present. Things to consider and act upon in the future include, but not limited to a close monitoring system of the boat launch area for new infestations, a physical removal program for such small introductions, and perhaps a barrier put in place around the boat ramp to catch new plants as they float off of trailers, thus preventing the salvinia from floating into new areas of the lake.

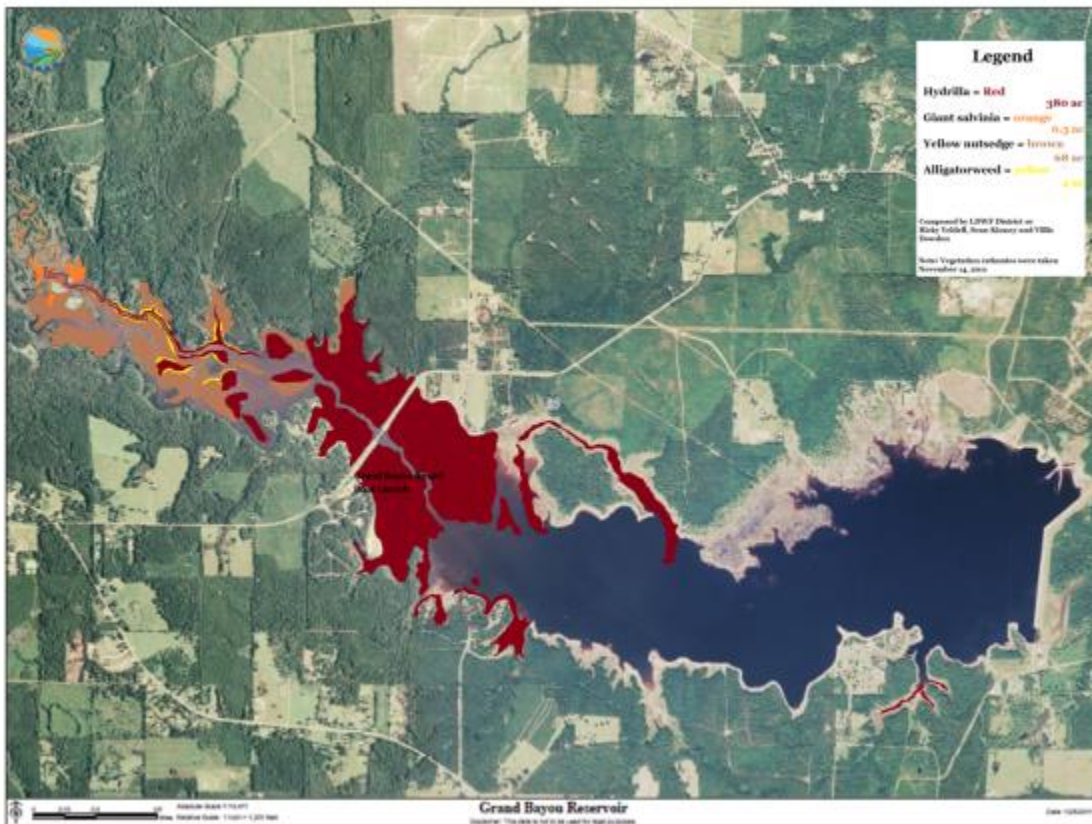
Hydrilla densities have been greatly reduced from the three previous drawdowns. In 2006, hydrilla covered approximately 30% of the reservoir and has now been reduced to the point where no hydrilla was observed visually during the survey. During the 2008 survey, hydrilla plants were found using a drag in several areas of the lake that originally had severe infestations of the plant. Hydrilla shoots found were 4-6" in length and indicated new growth occurring from the tubers in the soil. In 2009, hydrilla was still only found in these two areas and in similar densities/abundance. It appears that there are remaining viable hydrilla plants in the lake, but presently are not expanding in range or density. Close monitoring of the plant will be required.

# Vegetation Type Map 2009

John K. Kelly - Grand Bayou Reservoir  
2500 Acres



**Aquatic Vegetation Typemap 2011**  
**John K. Kelly – Grand Bayou Reservoir**  
**2,500 Acres**  
**Red River Parish, Louisiana**



## **Louisiana Revised Statutes Relative to Grand Bayou Reservoir**

### **RS 38:2701**

#### **PART V. JOHN K. KELLY GRAND BAYOU RESERVOIR DISTRICT**

##### **§2701. Creation**

There is hereby created a recreation and water conservation district to be known as the "John K. Kelly Grand Bayou Reservoir District".

Acts 1958, No. 474, §1; Acts 1989, No. 176, §1; Acts 1993, No. 120, §1.

### **RS 38:2702**

##### **2702. Location**

The area comprising all of Red River Parish shall be the boundary of the district.

Acts 1958, No. 474, §2; Acts 1989, No. 176, §1.

### **RS 38:2703**

##### **2703. District as political subdivision and body corporate; purpose and powers**

A. The district so created shall be a political subdivision and budgetary unit of the state of Louisiana which shall have for its purpose the development of the wealth and natural resources of the district by the conservation of soil and water for agricultural, recreational, commercial, industrial, and sanitary purposes.

B. It shall constitute a body corporate in law with all powers, rights, privileges, and immunities of a corporation. It shall have the power to sue and be sued, to buy and sell, to levy taxes, to negotiate and execute contracts, and to incur debts and issue negotiable bonds in payment thereof under and in accordance with existing laws. It shall have the authority to acquire by purchase, donation, expropriation, or otherwise every type and specie of property, including servitudes and rights of use, necessary to its purpose, and to lease, build, operate, and maintain any works or machinery designed to accomplish the purposes of the district.

C. It shall have complete control over the supply of fresh water made available by its facilities which shall be administered for the benefit of the persons residing or owning property within the district, and if it should be for the benefit of the district it shall have the authority to sell such water for irrigation, municipal, and industrial uses both within and outside the district.

D. The district shall constitute an agency of the state of Louisiana designed to carry out an essential governmental function of the state, all of the property of which district shall be exempt for taxation. It shall have the authority to cooperate and contract with the government of the United States or any department or agency thereof and to accept grants and donations of property and money therefrom. It shall have the authority to cooperate with the state of Louisiana or any political subdivision, department, agency, or corporation of said state for the construction, operation, and maintenance of facilities designed to accomplish the purpose for which the district is created on any basis including the matching of funds and by participating in projects authorized by any federal or state law as it shall see fit.

Acts 1958, No. 474, §3; Acts 1989, No. 176, §1.

**RS 38:2704**

2704. Board of commissioners, appointment; tenure; vacancies; compensation

A. The district shall be governed and controlled by a board of seven commissioners, each of whom shall be a qualified elector of Red River Parish residing within and owning property within the district. The members of the board of commissioners shall be appointed by the governor for a five year term. Any vacancy in the office of commissioner due to death, resignation, or any other cause shall be filled by the governor for the unexpired term.

B. Members of the board of commissioners shall receive no compensation for their services. The board shall be domiciled at Coushatta, Louisiana.

C. Each appointment by the governor shall be submitted to the Senate for confirmation.

Added by Acts 1958, No. 474, §4; Amended by Acts 1966, No. 448, §4; Acts 1985, No. 834, §1, eff. July 23, 1985; Acts 1989, No. 176, §1; Acts 1990, No. 146, §1.

**RS 38:2705**

2705. Oaths

Before entering upon his official duties each member of the board of commissioners shall take an oath before an officer authorized by law to administer an oath that he will faithfully, honestly, and impartially perform his duties.

Acts 1958, No. 474, §5; Acts 1989, No. 176, §1.

**RS 38:2706**

2706. Election of officers; record book

Immediately after the members of the board of commissioners have been appointed by the governor, or as soon as thereafter is practicable, they shall meet and organize by electing from their number a president, vice-president, and secretary who shall perform the duties normally required of such officers. The said board shall also select the name by which the district and any lake in the district is to be known and cause it to be recorded in a bound book which shall also be the depository of the minutes and proceedings of the board, certificates, oaths of commissioners, and any and all corporate acts of the board. This book shall be in the custody of the secretary of the board and shall be open for public inspection at all reasonable times.

Acts 1958, No. 474, §6; Acts 1989, No. 176, §1.

**RS 38:2707**

2707. Powers of the board

In order to accomplish the purposes for which the district is created, the board of commissioners may:

(1) Purchase, hold, sell, and convey immovable and movable property and execute such contracts as it may deem necessary or convenient to enable it properly to carry out the purposes for which it is created.

(2) Acquire servitudes and rights of use by purchase, by expropriation, and by assignment for the reservoir or recreational areas or otherwise.

(3) Assist in conserving soil and water and in developing the water resources of the district; provided, however, nothing shall be done to interfere with districts or municipalities previously organized under Louisiana law.

(4) Cooperate with the state Department of Transportation and Development and other state agencies in the maintenance or improvement and the construction of any works or improvements for the control, retention, diversion, or utilization of water; retard runoff of water and soil erosion, construct any ditch, channel improvement, dike, dam, or levee, and repair, improve, and maintain any of said improvements or structure.

(5) Acquire movable property by donation or purchase; and employ and hire a secretary and other such personnel as may be necessary in the operation of the business of the district, and fix their compensation; and the commission is further authorized to employ engineers, attorneys, and other professional personnel as the need becomes necessary and fix their compensation.

(6) Levy taxes, issue bonds, and incur indebtedness within the limitations prescribed by the Constitution of Louisiana, and in the manner prescribed thereby.

(7) Cooperate and contract with persons, firms, associations, partnerships, private corporations, cities of this state, or other public corporations, and with any other local, state, and governmental agencies for the sale or use of any waters impounded hereby.

(8) Select a domicile and home office for the district.

(9) Grant franchises to telephone, telegraph, and electric power companies and grant franchises for the purposes of laying gas, water, sewer, electric light or other utilities to supply the inhabitants or any person or corporation with gas, water, sewerage, light, when such construction is within the reservoir, the surcharge area, being that property between the 138.5 contour line and the 147.5 contour line or 1/4th of a mile extending perpendicular to the 138.5 contour line.

(10) REPEALED BY ACTS 1993, NO. 830, §2.

(11) Appoint, hire, designate, and empower wardens, rangers, patrols, and such other personnel as may be deemed necessary by the commission for the enforcement of such regulations as may be promulgated and adopted by the said commission.

(12) The district shall have, with respect to the improvements and maintenance of the district, the advice of the Department of Transportation and Development, and it shall request from time to time the assistance of the department to make such surveys, inspections, and investigations, render such reports, estimates, and recommendations, and furnish such plans and specifications as the board of commissioners of the said district may request from time to time.

(13) The district is hereby authorized to incur debt for any one or more of its lawful purposes, to issue in its name negotiable bonds or certificates of indebtedness evidencing such debt, and to provide for the security and payment thereof as follows:

(a) To issue certificates of indebtedness maturing within one year from date of issuance to evidence money borrowed in anticipation of current revenues for the administration, operation, construction, and maintenance costs and expenses of the district, which certificates shall be payable in principal and interest from any available income, revenues, fees, or taxes pledged to their payment by the district.

(b) To issue bonds substantially in the manner set forth in Article VI of the Constitution of Louisiana, and other authority supplemental thereto, particularly Part III of Chapter 4 of Title 39 of the Louisiana Revised Statutes of 1950. Such bonds shall be payable from an ad valorem tax on all taxable property in the district sufficient to pay such bonds in principal and interest, when approved by vote of a majority in number of the qualified electors voting on the proposition at an election held for that purpose in accordance with Part II of said Chapter 4, Title 39. Such bonds be that prescribed by such law. The bonds shall be issued in such amount or amounts as the board of commissioners shall determine; provided, however, the principal amount of all such bonds outstanding as of the date of the issuance of any new bonds shall never exceed ten per cent

of the assessed valuation of the taxable property within the district, to be ascertained by the last assessment roll of record in the Parish of Red River.

(14) The district shall have additional authority to levy taxes under the provisions of Article VI, Section 32 of the Constitution of Louisiana, for the purpose of improving, operating and maintaining its facilities, providing any such tax shall first be approved at an election held for said purposes in accordance with Part II of Chapter 4 of Title 39 of the Louisiana Revised Statutes of 1950, as amended.

(15) The copy of any resolution levying a tax, certified by the secretary of the board of commissioners of said district, shall be transmitted to the tax assessor of the parish on or before May first of the year in which the tax is to be assessed and collected, and it shall be the duty of the assessor to assess the tax and extend the same upon the tax rolls of the parish. The tax shall be collected by the sheriff and ex officio tax collector of the parish in the same manner as taxes levied by the state. The tax collector shall make settlement for taxes so collected with the state treasurer for the account of the respective district, and the funds so derived shall be withdrawn upon the warrant of the secretary of the board of commissioners of the reservoir district countersigned by the president of said commission. Taxes assessed shall constitute the same liens upon the property assessed; shall bear the same penalties; and collection thereof shall be enforced in the same manner and at the same time as state and parish taxes.

(16) The parish shall not be entitled to reimbursement out of the property tax relief fund for any sums which may be lost to it occasioned by any homestead exemption which may be applicable to any property within the parish with respect to any tax levied under the authority of this part, as amended.

Acts 1989, No. 176, §1; Acts 1993, No. 120, §1; Acts 1993, No. 830, §2.

## **RS 38:2708**

### **2708. Rules and Regulations**

In order to accomplish the purposes of the district to protect the works, improvements, and property of the district, both immovable and movable; to secure the best results from the construction, operation, and maintenance thereof, and to prevent damage to the district by misuse of any works, improvements, or properties or by the pollution by solid or liquid or substance or misuse of the waters of the district or any water course therein, the board of commissioners may make and enforce such rules and regulations as it shall deem necessary and advisable:

(1) To protect and preserve the works, improvements, and properties owned or controlled by the district, prescribe the manner of their use by public corporations and persons, and preserve order within and adjacent thereto.

(2) To prescribe the manner of building bridges, roads, fences, including fences for the control of livestock or other works in, along, or across any channel or extending into the reservoir.

(3) To prescribe the manner in which natural or artificial drains, ditches, sewers, pipelines, or other works shall be adjusted to or connected with the works of the district or any water course therein and the manner in which the water courses of the district may be used for sewer outlets for disposal of waste.

(4) To prescribe the permissible uses of the water supply, provided by the impoundments constructed, and to prevent the pollution or unnecessary waste of such water supply.

(5) To prohibit or regulate the discharge into sewers of the district of any liquid or solid waste deemed detrimental to the works and improvements of the district.

(6), (7) REPEALED BY ACTS 1993, NO. 830, §2.

Acts 1958, No. 474, §8; Acts 1989, No. 176, §1; Acts 1993, No. 830, §2.

**RS 38:2709**

2709. Construction which would impede flow of water in reservoir prohibited; pollution defined and prohibited; penalties fixed for violations

A.(1) No person or public corporation shall erect within the drainage area of the district any dam or reservoir upon any stream or water course which will affect the proposed lake until a copy of the plans thereof has been filed with the board of commissioners for approval.

(2) Whoever violates this Subsection shall be fined not less than five hundred dollars or more than one thousand dollars or imprisoned for not more than sixty days, or both.

B.(1) No person shall knowingly and willfully empty or drain into, or permit to be drained from any pumps, reservoirs, wells, or oil fields into any stream or drain constituting the watershed of the proposed lake or from any stream within said district into the said reservoir any oil, salt water, or other noxious or poisonous gases or substances which would render the water unfit for irrigation purposes or would destroy aquatic and fish life in the streams.

(2) Each and every day that oil, salt water, or other substances are permitted to flow into natural streams or drains which constitute the watershed of the proposed lake shall constitute a separate and distinct offense.

(3) Whoever violates this Subsection shall be fined not less than one hundred dollars or more than two hundred dollars or imprisoned for not more than three months.

C.(1) No person shall:

(a) Obstruct drainage channels which compose any drain or stream flowing into the proposed lake by bridging them except in accordance with plans, specifications, and instructions prescribed by the board of commissioners of the district.

(b) Construct dams, locks, or gates in drainage channels of the said watershed of the proposed lake without permission of the commission.

(c) Anchor rafts, crafts, fish traps, fish cars, and other obstacles in the channel of any stream, drain, or natural flow of the feeder streams of the watershed of the proposed lake.

(d) Drain into channels by natural or artificial inlets except under regulations prescribed by the board of commissioners.

(e) Float timber in the watershed of the proposed lake.

(f) Use the channels for transportation or navigation except under authority of and agreement with the board of commissioners.

(g) In any manner obstruct drainage channels, natural flow drains, or natural flowage or violate any of the rules or regulations adopted and promulgated by the board of commissioners for preserving and maintaining the efficiency of the drainage channels in the district.

(2) Whoever violates this Subsection shall be fined not less than two hundred and fifty dollars or more than five hundred dollars or imprisoned for not more than sixty days, or both.

D.(1) No proprietor, owner, lessee, or possessor of land abutting upon the reservoir of the proposed lake or upon any public road paralleling the water line or contiguous to the reservoir of the proposed lake shall in any manner close or place any obstruction in the drains or ditches, whether on private property or on the public road or levee adjacent to the road which will in any manner interfere with the effective, thorough, and continuous drainage into the reservoir.

(2) Whoever violates this Subsection shall be fined not less than two hundred and fifty dollars nor more than five hundred dollars or imprisoned for more than sixty days, or both.



(3) The sheriff of the parish, in addition to his other duties is charged with the responsibility of aiding and assisting the commission or its employees or agents in the enforcement of all rules and regulations adopted in accordance herewith.

E. The district attorney of the judicial district within which the reservoir district is situated is hereby designated as the proper official for the prosecution of all violations of the rules and regulations adopted by the said commission in pursuance hereto.

Acts 1989, No. 176, §1.

### **RS 38:2710**

2710. Supervision by Department of Transportation and Development

All of the powers and duties relative to construction and letting of contracts for construction required to be advertised by R.S. 38:2211 and 2212 conferred upon the district shall be subject to and exercised under the supervisory control of the Department of Transportation and Development of the state of Louisiana, which department shall furnish to the district such engineering services as it shall require and may cooperate with the district in the construction of any work or facility considered necessary by the district and said department to the purposes of the district.

Acts 1989, No. 176, §1.

### **RS 38:2711**

2711. Contracts let by board; bond

At the discretion of the Commission, any and all contracts of the district may be let by the board of commissioners, with advertisement, on the terms and subject to the conditions which it may fix in the ordinance or advertisement calling for bids. The person or firm to whom any contract is awarded shall furnish, within the delay fixed by the board, a bond of a surety company authorized to do business in the state of Louisiana, in the amount required by the laws relating to contracts for public works, and conditioned that the work shall be performed in accordance with the plans and specifications of the engineers, and the terms of the contract, and the board shall demand any other bonds and obligations which the laws relating to public works contracts required the contractor to give. However, the provisions for advertising and procuring bond may be dispensed with by the commission so long as said actions comply with Louisiana law.

Acts 1989, No. 176, §1.

### **RS 38:2712**

2712. Mineral rights

Whenever it shall become necessary for the district or the Department of Transportation and Development, to acquire full ownership of any land for the purpose of constructing any work or facility within the district, the owner thereof in his own behalf or in behalf of his assigns in the event of a prior assignment may retain the mineral rights to such property together with the right to grant mineral leases and servitudes thereon. No form of prescription shall divest such owner or his assigns of these rights so long as the district, the department, or some other department or agency of the state retains the ownership of the property, but should ownership pass into private hands, the prescription of nonuse provided by R.S. 31:27 shall apply as in the usual case.

Acts 1989, No. 176, §1.

**RS 38:2713**

2713. Tax exemption; mineral leases unabridged

Should the district or the Department of Transportation and Development acquire servitude, right of use, or title in full ownership to immovable property or any other property, such property shall not be subject to any ad valorem tax or tax of any nature by the state of Louisiana or any political subdivision thereof so long as such property is used for the purpose of the district. The provisions of this Part shall in no way abridge the right of any individual, person, firm, or corporation from whom a servitude or right of use may have been acquired to lease the land subject thereto for the production of oil, gas, or other minerals and to produce or cause to be produced oil, gas, or other minerals from such property so long as said leases are subject to the terms and conditions of the servitude executed in favor of the commission.

Acts 1989, No. 176, §1.

**RS 38:2714**

2714. Employment of attorneys

The board of commissioners may employ an attorney to represent it in any and all matters deemed necessary and may provide for the payment of his services.

Acts 1989, No. 176, §1.

**RS 38:2715**

2715. Playgrounds, parks, and other facilities; limitation

The board of commissioners shall have the power to cause to be created and constructed playgrounds, picnic grounds, grounds for recreation, parks, and any and all other facilities to accommodate the public and to provide adequate access to the proposed lake, as may within the opinion of the board become necessary, and the district shall have the right of eminent domain and expropriation in the exercise of such powers.

Acts 1989, No. 176, §1.

**RS 38:2716**

2716. Management of fish, game, and wildlife

A, B, C. REPEALED BY ACTS 1993, NO. 830, §2.

D. The board of commissioners shall have authority:

- (1) To establish and cause to be enforced rules and regulations pertaining to all commercial establishments which may be constructed for the purpose of commercializing and making commercial use of the facilities provided by the reservoir; and
- (2) To license and permit such establishments and to levy and collect a fee, to be fixed by the commission, for the privilege of making commercial use of the facilities of the lake, or to refuse to license or permit any commercial establishment to use the facilities provided by the lake.

E. The rules and regulations established and promulgated by the board of commissioners shall

provide penalties for any commercial establishment operating without a permit or license, and the rules and regulations shall be enforced by the sheriff and violations thereof prosecuted by the district attorney of the judicial district within which the reservoir district is situated, as hereinabove provided.

Acts 1989, No. 176, §1; Acts 1993, No. 830, §2.

**RS 38:2717**

**2717. Management of improvements**

A. The board of commissioners shall have the right to regulate the construction and use of all piers, docks, bridges, and other improvements built or erected on any part of the district to be inundated by the proposed lake and shall further have the right to regulate and control the erection of any improvements of any kind whatever within the area between the 138.5 contour line and the 147.5 contour line or within 1320 feet perpendicular to the 138.5 contour line, whichever distance is greater. The board of commissioners shall have the authority and power to regulate the improvements by the issuance of permits for same and fix a fee for the issuance thereof.

B. The board of commissioners may charge an annual fee for the permit to maintain improvements on or within the area between the 138.5 contour line and the 147.5 contour line or within 1320 feet perpendicular to the 138.5 contour line whichever distance is greater.

Acts 1989, No. 176, §1.